

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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In the Matter of	§	
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Number Portability Query Services	§	CC Docket No. 98-14
	§	
	§	
Pacific Bell Tariff F.C.C. No. 128, Transmittal No. 1962	§	CCB/CPD 97-65
	§	
	§	
Southwestern Bell Tariff F.C.C. No. 73, Transmittal No. 2680;	§	CCB/CPD 97-64
	§	
	§	
Ameritech Tariff F.C.C. No. 2 Transmittal Nos. 1123, 1130;	§	CCB/CPD 97-46
	§	
	§	
Bell Atlantic Tariff F.C.C. No. 73, Transmittal No. 2680	§	CCB/CPD 97-52
	§	

SOUTHWESTERN BELL TELEPHONE COMPANY
AND PACIFIC BELL REBUTTAL

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SUMMARY*

The Bureau must determine in this proceeding--based solely upon the evidence provided--whether Bell Atlantic or Ameritech have met their burden of establishing that their rates are "just and reasonable." Although the proponents of the tariffs have been assigned the burden of proof, the Bureau is bound by its obligation to perform reasoned decision making and to determine whether the rates proposed are just and reasonable based upon the evidence presented and not upon the hyperbole of parties that will benefit from any error that could be propagated through improper analysis of costs or rates.

SWBT and Pacific Bell's specific rebuttals are as follows:

- Time Warner, AT&T, and others contend that queries should be required for calls to a "portable," or number-portability-ready, NXX only when the first customer in a NXX actually ports his number and that NXXs should not be made fully portable until an order to port is received or, alternatively, that carriers terminating calls to portable NXXs should not be required to pay for queries generated for the purpose of completing their calls. Industry standards for the opening of NXXs for number assignment and this Commission's orders governing the implementation of number portability, when taken together with the Commission's number portability switch selection process, require that NXXs be made number portable well in advance of an actual order to port. Calls to these NXXs could require queries to be made, therefore, and carriers such as Bell Atlantic and Ameritech should be permitted to charge a just and reasonable rate for any queries actually made in behalf of N-1 carriers.

* The abbreviations used in this Summary are the same as those used in the text.

- Time Warner and other commenters's attacks, including the attacks made by the wireless providers, on the proposed tariffs amount to little more than an attempt to avoid paying for costs these carriers cause. Nothing in the Commission's number portability orders authorizes the kinds of exemptions commenters seek.
- Although commenters complain about some of the costs that Bell Atlantic and Ameritech include in their rate calculations, such as certain OSS and SS7 costs and overhead loadings, these costs—properly calculated and accounted-for—are entirely consistent with appropriate ratemaking processes and should be allowed. The Bureau should not forget that services competitive with those provided under the proposed tariff will be available from other companies and that all carriers are free to choose not to take the services from either the incumbent, such as Bell Atlantic or Ameritech, or from another provider, but instead may provide their own LNP database functionalities.
- Billing and other "non-recurring" charges are perfectly appropriate provided that their rates are "just and reasonable" in light of the service being provided.
- Contrary to some of the comments, "transiting carriers" are not "N-1" carriers subject to the charges set forth in the Bell Atlantic and Ameritech offerings.

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**SOUTHWESTERN BELL TELEPHONE COMPANY
AND PACIFIC BELL REBUTTAL**

Southwestern Bell Telephone Company ("SWBT") and Pacific Bell file this rebuttal in support of the Direct Cases filed by Bell Atlantic and Ameritech and in response to the comments of Time Warner Communications Holdings, Inc. ("Time Warner"), AT&T Corp. ("AT&T"), MCI Telecommunications Corporation ("MCI"), WorldCom, Inc. ("WorldCom"), Comcast Cellular Communications, Inc. ("Comcast"), Sprint Spectrum L.P. ("Sprint"), and Illuminet, Inc. ("Illuminet").

I. BURDEN OF PROOF

AT&T and others raise as a threshold issue the question of whether of not Bell Atlantic or Ameritech have met through the combination of their initial filings and their direct cases the burden of proof placed upon them in a tariff investigation proceeding. As set forth in section 204 of the Communications Act of 1934, as amended, burden of proof is simply that the carrier must show the new charges to be "just and reasonable." Id. at § 204(a)(1).

Ultimately, the Bureau must determine, based upon the evidence provided, whether Bell Atlantic or Ameritech have met their burden of establishing that their rates are "just and reasonable." Some of the commenters have complained about aspects of the costs or demand projections Bell Atlantic or Ameritech used in formulating their respective rates, including some underlying assumptions about the present and expected future state of competition, the effects of that competition upon incumbent local exchange carriers' ("LECs") networks, or the ultimate cost of and demand for long-term number portability ("LNP" or "number portability"). Under the assigned burden of proof, however, the Commission is bound by its obligation to perform reasoned decision making. SWBT and Pacific Bell urge the Commission to determine whether the rates proposed are just and reasonable based upon the evidence presented and not upon the hyperbole of parties that will benefit from any error the Commission may propagate through improper analysis of costs or rate design

II. THE BELL ATLANTIC AND AMERITECH DEMAND FORECASTS AND TARIFF RATE STRUCTURES ARE BASED UPON THE REASONABLE ASSUMPTION THAT QUERIES WOULD BE CHARGED WHEN NXXS ARE MADE PORTABLE

Time Warner, AT&T, and others contend that queries should be required for calls to a "portable," or number-portability-ready, NXX¹ only when the first customer in a NXX actually ports his number. These commenters contend, therefore, that NXXs should not be made fully portable until an order to port is received or, alternatively, that carriers terminating calls to portable NXXs should not be required to pay for queries generated for the purpose of completing their calls.²

These commenters's arguments are deeply flawed. Industry standards for the opening of NXXs for number assignment and this Commission's orders governing the implementation of number portability,³ when taken together with the Commission's number portability switch selection process, require that NXXs be made number portable well in advance of an actual order to port. As a consequence, calls to these NXXs could require queries to be made, and carriers such as Bell Atlantic and Ameritech should be

¹ NXX means, "In the North American direct distance dialing number plan, a central office code of three digits that designates a particular central office switch or given 10,000-line unit of subscriber lines: 'N' is any number from 2 to 9, and 'X' is any number from 0 to 9." GLOSSARY OF TELECOMMUNICATIONS TERMS at N-13 (Government Institutes 1997).

² Time Warner at 2-7; AT&T at 7-9; Comcast at 3-5; Sprint at 4-6.

³ In the Matter of Telephone Number Portability, CC Docket No. 95-116, First Report and Order and Further Notice of Proposed Rulemaking (released July 2, 1996) (respectively, the "First Report and Order" and the "FNPRM"); In the Matter of Telephone Number Portability, First Memorandum Opinion and Order on Reconsideration, FCC 97-74 (released March 11, 1997) (the "First Reconsideration Order"); In the Matter of Telephone Number Portability, CC Docket No. 95-116, Second Report and Order, FCC 97-289 (released August 18, 1997) ("Second Report and Order").

permitted to charge a just and reasonable rate for any queries actually made in behalf of N-1 carriers.

A. BELL ATLANTIC AND AMERITECH'S ASSUMPTIONS ARE
FOUNDED UPON INDUSTRY STANDARDS

1. THE BELL ATLANTIC AND AMERITECH TARIFF
STRUCTURES ASSUME CHARGES FOR QUERIES MADE
AFTER THE OPENING OF A NXX.

From a review of the information available, the Bell Atlantic and Ameritech tariff rate structures were developed assuming queries would be made for all interswitch calls to all portable NXXs from the date of their opening. To the extent that Bell Atlantic or Ameritech perform the queries for N-1 carriers that send calls to their respective end offices unqueried, whether on a prearranged or default basis, their tariffs assume for demand and rate purposes that the N-1 carrier will be charged for the appropriate query service. The tariffs require N-1 telecommunications carriers that do not perform their own queries for calls terminated, or attempted to be terminated, to upgraded, number-portability-ready switches to pay for the query that Bell Atlantic or Ameritech automatically performs for them in the current Location Routing Number ("LRN") number portability architecture. The tariffs seek recovery for all queries performed for N-1 telecommunications carriers that do not perform their own queries, but only for those queries actually performed.

2. THE SWITCH SELECTION PROCESS DRIVES IMPLEMENTATION

LECs choose through the process authorized under the First Reconsideration Order the central office switches in which number portability is to be deployed.⁴ After the switch selection process is initiated, both for the initial deployment of number portability and later for additionally-designated switches, SWBT and other LECs are required to make ready those switches to permit porting on the time schedule the Commission prescribed. LECs have no choice but to upgrade switch software and to incur the costs of building SS7 and database networks capable of handling queries to all switches that have requested be made number-portability-ready under the Commission's guidelines.

The time necessary to "make ready" a network to recognize when database queries are required for a particular, selected switch--in which multiple NXXs reside--is comparatively lengthy. This remains the case even though some of these NXXs in the number-portability-ready switch will have numbers ported, and some will not.

3. THE NATIONAL NXX CODE OPENING PROCESS IS ANALAGOUS

The national NXX code opening process that has been in effect for years is an analogous function. The industry has long recognized that the time for service providers to perform routing translations⁵ and requisite testing for activating new NXXs in multiple

⁴First Reconsideration Order at ¶¶59-71.

⁵"Translations" are the encoding of specific destination code routing information which is interpreted by a switching system to determine routing of a call.

switches is substantial. The industry, therefore, has allotted a minimum of 45 days in which to complete routing translations.⁶

4. THE PROCESS OF OPENING NXXs TO NUMBER PORTABILITY
MUST BE PERFORMED TO AVOID MISROUTED CALLS AND
CUSTOMER DIFFICULTIES

In the number portability context, the industry established a code opening process that provided 45 days from the time an existing code was listed in the LERG as portable until the first porting order for porting could be issued with its requisite five-day service interval. Of all the necessary work functions that are required to allow that first porting order to be completed, the switch translations to activate querying are the most complex and time consuming. Had the requests for making switches number-portability ready been less pervasive and had LECs been given 45 days to introduce number portability to a switch at the time the first order for porting is received, number portability could have been implemented more selectively and query requirements perhaps lessened. They were not. Under the current architecture, all calls to portable NXXs must be capable of being queried in order to avoid misrouted calls and customer difficulties.⁷

⁶ See Procedures as Established in Local Exchange Routing Guide (the "LERG"). The LERG is the result of processing data contained in the Bellcore Routing Data Base System ("RDBS"). RDBS processes Local Service Provider ("LSP") routing and rate center data to produce both on-line inquiry and off-line reports for the administration of routing within the NANP (excluding Canada). The LERG is divided into the following sections: 1, 2, and 3) general administrative information; 4) destination code; 5) switching entity; 6) rate center and locality; 7) tandem homing arrangements; 8 and 9) operator services.

⁷ For purposes of comparison, the proposal to begin and complete number portability switch translations for each NXX in each end office switch within a 5-day interval after a service order is received would be the same as not beginning routing translations on a new NXX until the first order is received out of the NXX. The industry has not adopted code opening procedures like these because they would inevitably result in misrouted calls and customer trouble.

B. THE COMMENTS FAIL TO REFUTE THE REASONABLENESS OF THIS ASSUMPTION

1. TIME WARNER MISCHARACTERIZES THE TRUE NATURE OF THE PROCESS TO OPEN NXXs TO NUMBER PORTABILITY

Time Warner contends that North American Numbering Council ("NANC") procedures provide a two-part approach for implementing LNP in a NXX.⁸ The first phase should be used for Global Title Translation and is supposedly triggered when a carrier advises the regional number portability database operator, or "NPAC," of an NXX being made portable. The second phase starts with the porting of the first number in an NXX, which according to Time Warner is the time for the carriers to activate query translations in all end office switches (or to start charging if the queries were activated earlier).

Time Warner mischaracterizes NANC's work. As set forth in the attached excerpt from the NANC Technical and Operational (T/O) Task Force Report that the FCC adopted (See Attachment A), the NANC processes for Code Opening solely address NPAC process flows and do not dictate or address the steps carriers must take within their networks to implement LNP for a NXX. As Figure 9 of the NANC T/O Task Force Report sets out, the process for the first telephone number ported in an NXX only specifies the date by which internal carrier modifications must be completed

Ironically, Time Warner's Appendix to its Comments contradicts its position. Pages 2-4 of the Time Warner Appendix contain the Southwest Region Code Opening Process which adopted the NANC T/O flows and provided more detail regarding

⁸ Time Warner at 2-3; See also AT&T at 7-9.

individual carrier requirements. At the bottom of the block diagram of the process flow on page 2 of the Time Warner Appendix, Note 1 states,

SS7 Global Title Translation (GTT) changes are required to facilitate 10-digit translations. The NXX must also be translated in the switch to query the SCP for routing information. Both of these changes (query set-up and 10 digit GTT's) can take place when the LERG is issued, when the NPAC sends initial notification, or when the NPAC broadcasts the initial subscription request as long as they are in place when the 1st customer, in the NXX, ports.

The process flow Time Warner cites, therefore, reflects the industry standard 45-day interval for availability after a NXX code is published in the LERG as portable. The first port into or out of the NXX can begin no earlier than the 45-days of the process beginning and must be completed within five days after the end of that period.

Time Warner suggests that the smallest portion of the translation workload, the GTT in the signaling transfer points⁹ serving a number portable area, would be handled in the 45-day interval. The lion's share of the translation load, performing the translation work to activate queries in each end office switch, operator services switch, and tandem switch, should be completed in the five-day interval. This is clearly unreasonable and contrary to the underlying rationale for establishing the industry timetables.¹⁰

⁹ Signaling Transfer Points ("STPs") are specially designed packet switches which are part of the Common Channel Signaling ("CCS") network facilitate the exchange of SS7 signaling messages between network facilities (e.g., end offices, operator services switches and databases).

¹⁰ Time Warner has presented its "evidence" in a deceptive manner. Time Warner has attached several pages from the SW Region Code Opening Process representing them as approved by the SW Operations team. Although it attached a detailed copy of the process, it omitted Note 1, a note that was included in the final and approved version of the document. Time Warner, co-authored the document through an employee who co-chaired the Team. Not including the Note changes dramatically the meaning of the process steps.

2. SPRINT'S CONTENTIONS LIKEWISE MISS THE MARK

Sprint, too, contends that query charges should be permitted only after a number has been ported.¹¹ In "support," Sprint refers to NANC's Architecture and Administration Plan and attaches copies of several pages from a document dated April 23, 1997 (the "Sprint Attachment"). Nothing in the Sprint Attachment speaks to the issue of doing queries only after the first number in an NXX has ported. In fact, Scenario 3 on Figure 2 (Sprint Attachment) shows an originating LEC launching a query based on the NXX being in the LERG as portable, only to find the dialed number has not ported. There is no evidence in the industry documents Sprint cites to support its assertion that the industry agreed that LNP queries would only be "permitted" after the first number in a NXX has ported. To the contrary, querying by the originating network (or the N-1 network) may begin any time after the LERG designates an NXX as portable. The LERG designation is not triggered by the first port in a code.

C. THESE CARRIERS ARE SIMPLY ATTEMPTING TO AVOID PAYING FOR COSTS THEY CAUSE

Time Warner and the other carriers aligned with it on this issue clearly wish to circumvent standard industry methods in a self-serving, albeit misguided, attempt to

Specifically, Note 1 acknowledges that carriers requirements differ greatly due mainly to quantity of switches they have to translate (i.e., some carriers have one switch in Houston, while others (namely SWBT) have 68 switches with over 1000 NXX's) Note 1 was added specifically to address this issue. It provides the flexibility for carriers to accommodate differences in their networks. The 5-day interval, therefore, was acknowledged to be insufficient, and Note 1 was the concession of the group to acknowledge requirements differences and the plan to query when the NXX is published in the LERG.

¹¹ Sprint at 4.

delay or avoid bearing its costs associated with the use of LNP and in a manner that would increase the incumbent ILEC's cost of providing and would unnecessarily delay competitively neutral cost recovery.

1. TIME WARNER'S THEORY OF "QUERY BUT-DON'T-CHARGE" IS A NON-STARTER

As an alternative, Time Warner suggests that Bell Atlantic and Ameritech may be permitted to perform the query activation translations and create the need for queries, but that N-1 carriers not be compelled to pay for the queries. Time Warner's suggestion is misguided. As a starting point, the same argument could be made for the five-day interval. Time Warner recognizes the need to activate queries in advance and to begin paying before the first number in a NXX is actually turned up in the competitor's switch. Time Warner only quibbles about whether charges should start after the LERG is published or after the number is ported.¹²

¹² It should be noted that SWBT agreed with Time Warner and other CLECs (e.g., MCI) on number portability activation requests in the Southwest Region that all NXXs in selected switches be made portable with the understanding that the Southwest Region Code Opening Process would be used. If Time Warner and other competitors desire to avoid queries until a number is ported, then these NXXs should be made "non-portable." Time Warner objects to this solution because of the 45 + 5-day interval required for opening a code for the first telephone number to be ported, but carriers cannot have it both ways. Indeed, Time Warner and other's requests for all NXXs to be opened would seem to signal an expectation of robust competition, for which SWBT and Pacific Bell have made strides to accommodate. If so, Time Warner's proposal that incumbent LECs establish onerous and infeasible methods inconsistent with industry standards would at best only provide a brief delay in full querying. If these carriers are not anticipating robust competition and utilization of LNP, they should reduce their requests for switches and for the opening of all NXXs accordingly.

2. N-1 CARRIERS WILL INCUR COSTS, JUST AS THE COMMISSION CONTEMPLATED

Time Warner also claims that, if imposed, such charges would cause other carriers to incur substantial costs. Time Warner points out that it and others may have to pay third-party SS7 vendors on a per query basis. While this may be true, "number portability" is an obligation of all LECs, and the Commission's orders clearly require all N-1 carriers to bear the costs they cause. The incumbents whose tariffs are in issue will have incurred the costs of establishing the query capability and cannot avoid or recover those costs with the Time Warner proposal.

Time Warner argues that imposition of these unnecessary and yet substantial costs of querying on N-1 carriers violates FCC policy of requiring number portability upgrades only where necessary to advance competition.¹³ Sprint also argues that querying NXXs before a number is ported is "unreasonable, not competitively neutral, and has a tremendous adverse cost impact."¹⁴ Time Warner, Sprint, and the other competitors have driven these costs in their selection of switches and in their insistence that all NXXs in selected offices be made portable because they are unwilling or unable to live with the existing industry standard intervals for code opening. If the switch selections were in fact unnecessary, they should not have been made. The incumbent LECs in this proceeding are merely carrying through to ensure that they can meet their obligation to provide number portability on orders within the intervals specified.

¹³ Time Warner at 4-5.

¹⁴ Sprint at 5. Sprint, for instance, uses an example in its comments where 30% of calls to Bell Atlantic or Ameritech are to a NXX with ported numbers, but the incumbent would charge query service charge on 100% of calls routed to it. Sprint estimates the cost impact to be \$2-10 million per year.

3. THESE PROPOSALS MAY WELL HAVE LITTLE IMPACT
ON THE OVERALL COST TO N-1 CARRIERS THAT BUY
QUERIES

Instead, these carriers' proposals would reduce query volume estimates which would drive an increase in per query costs. This could result in those carriers using the incumbent's network for prearranged or default routing having to pay higher charges. At best, it would be expected that their overall query costs to purchase (the per query charge multiplied by the number of queries) would remain close to the same. Incumbent LECs have already spent the money; Time Warner's proposal to avoid or defer their LNP costs by increasing incumbent's costs and delaying cost recovery is not competitively neutral.

Importantly, third-party suppliers of database queries would be faced with similar economics. They would have to size their networks to ensure that they can handle the query volumes for all NXXs, but then would be faced with lower query volumes over which to recover those costs and make a profit. The cost savings touted really amount only to a Time Warner cost deferral and delay of cost recovery for providers of query services. In fact, deferring the cost in the manner Time Warner describes may in fact increase costs, not only for Time Warner, but for all users over the long-term. This increase would come from compression of the time needed to perform the necessary work, thereby requiring additional personnel or overtime.

D. TIME WARNER'S PROPOSALS IMPERMISSIBLY SHIFT COSTS
AND RECOVERY RISKS

Time Warner also contends that "[n]umber portability charges, including querying charge, should cover the cost of serving ported numbers only."¹⁵ Contrary to Time Warner's contentions, however, the network and system modifications required for LNP are not solely to port a number, but are also required to permit customers that are not porting a number--wherever they may be located--to reach all other customers. The FCC has found LNP to be in the public interest as a benefit to all customers--not just those that have ported their numbers.

Time Warner also states that cost of making changes on one-NXX-by-one-NXX basis must be weighed against the cost of unnecessary queries. First, at best, Time Warner's proposal only serves to delay their incurring costs of LNP. In fact, as discussed earlier, for those that purchase queries the lower query volumes would be offset by higher query rates.

Second, Time Warner's proposal would add costs to the carriers whose tariffs are in issue, as well as other incumbents. Incumbents have already expended the costs to establish query capabilities. On top of these already fixed expenditures, Time Warner's proposal would significantly increase incumbents' costs to develop systems and add personnel to attempt to perform query translations for each NXX in every switch with the first order in the NXX within the proposed five-day interval.¹⁶

¹⁵ Time Warner at 6.

¹⁶ In SWBT's Houston MSA, for example, this procedure could require up to 66,000 separate translations instead of 66 translations. This is not a viable alternative.

Third, to the extent that query charges may be used to recover number portability costs, Time Warner's proposal would delay incumbent's cost recovery. If use of LNP is robust, all NXXs would be expected to have at least one ported number in a relatively short period of time. Time Warner's position that this represents significant costs savings may be signaling that they do not anticipate robust use of LNP. If that is the case, incumbents' query services may be under subscribed and cost recovery could be significantly delayed, making it less than competitively neutral since incumbents would be burdened with costs that Time Warner would be able to avoid. Rather than seeking to avoid appropriate payment of costs for LNP, Time Warner should have been more prudent in their switch and NXX selections.¹⁷

E. TIME WARNER'S "SOLUTION" IS NOT A SOLUTION

Time Warner suggests that problems can be mitigated by opening querying at all end offices but suppressing the need to query at the tandem where all carriers interconnect with the incumbent at tandem offices. Many carriers do not interconnect at the tandem for all of their traffic. Carriers have the right to interconnect directly to end offices; and thus, many carriers may not interconnect at the tandem for all of their traffic. Time Warner's proposal would still require querying at the end office on all calls from the tandem to nonworking numbers. Even if carriers could be limited to interconnection at

¹⁷ Time Warner's statements that if ILECs had concerns that "flash-cut adoption of number portability would overwhelm their SS7 networks," then they should have incorporated them into NANC and other guidelines are misleading. In its support of QoR, SBC, the ultimate parent company of SWBT and Pacific Bell, expressed a great deal of concern with the stepped increase in load that is inherent in LRN. Because the Commission ruled that QoR was not allowable, SWBT and Pacific Bell have integrated a gradual loading of its network in their intranetwork testing during the implementation interval. The NANC and the Regional groups have not addressed carriers internal network testing activities.

the tandem, incumbents would incur still additional costs the recovery of which would be delayed.

F. IF THE DEMAND ASSUMPTION IS REJECTED, THE OVERALL RATE STRUCTURE MUST BE REBUILT TO ACCOMMODATE MUCH SMALLER DEMAND AND MUCH HIGHER PER-QUERY RATES

Elasticities of demand are difficult to assess in an entirely new service such as LNP query services. However, it is indisputable that providers such as Illuminet will compete with incumbent LECs and others for the provision of such services. Pricing is a function of both cost and demand, and to the extent that costs of deployment remain relatively constant while demand is reduced, either because of competitive pressures or a recalculation of demand (as may be the case if queries are charged only where a number is ported out of a NXX even though they are performed when the switch becomes number portability ready), the price must increase on a per query basis. This, too, could reduce demand. Ultimately, it is possible that if the demand becomes too depressed, a provider's price per query may become prohibitively expensive.

G. WIRELESS PROVIDERS CAUSE COSTS AND SHOULD PAY TO HAVE CALLS QUERIED

Sprint contends that it as a wireless provider should not be charged as provided under the Bell Atlantic or Ameritech tariffs to have its unqueried traffic terminated on the landline networks. Sprint's arguments are nothing more than an improper collateral attack on the FCC's number portability orders. As the Commission ruled in the First Reconsideration Order,

In the First Report & Order, we required all cellular, broadband PCS, and covered SMR carriers to have the capability of querying the appropriate

number portability database systems in order to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998. These wireless carriers may implement the upgrades necessary to accomplish the queries themselves, or they may make arrangements with other carriers to provide that capability.¹⁸

Although the First Reconsideration Order introduced some ambiguity in requirements through the end of the year, the Commission emphasized the importance of carriers taking responsibility for the routing of their calls in the Second Report and Order:

The efficient provisioning of number portability requires that all carriers know who bears responsibility for performing queries, so that calls are not dropped because the carrier is uncertain who should perform the database query, and so that carriers can design their networks accordingly or arrange to have database queries performed by another entity. Consistent with our finding in the *First Order on Reconsideration*, we conclude that the Location Routing Number system functions best if the N-1 carrier bears responsibility for ensuring that the call routing query is performed. Under the Location Routing Number system, requiring call-terminating carriers to perform all queries may impose too great a burden on terminating LECs. In addition, obligating incumbent LECs to perform all queries may impose too great a burden on terminating LECs. In addition, obligating incumbent LECs to perform all call routing queries could impair network reliability.

We note further that if the N-1 carrier does not perform the query, but rather relies on some other entity to perform the query, that other entity may charge the N-1 carrier, in accordance with guidelines the Commission will establish to govern long-term number portability cost allocation and recovery.¹⁹

We note that if a LEC performs data base queries on default routed calls, the LEC may charge the N-1 carrier, pursuant to guidelines the

¹⁸ Id. at ¶ 127 (footnotes omitted).

¹⁹ Second Report and Order at ¶ 74-75 (footnotes omitted).

Commission will establish regarding long-term number portability cost allocation and recovery.²⁰

Sprint's attack is, therefore, misplaced. Wireless carriers may be charged if they send unqueried calls into the landline network.

Sprint's argument that wireless carriers cause no number portability costs and gain no benefit from LNP is also unavailing. With respect to costs, the industry's LRN solution does not differentiate between callers in the public switched network that dial the digits, whether the transmission begins as wireline or wireless. When a wireless customer dials a wireline customer in a portable NXX and the call is delivered to the LEC via the interconnection trunks between the wireless provider and the LEC, the LEC network goes through the same machinations to complete that call as it would from any other N-1 carrier. Therefore, those call attempts are appropriately included in demand forecasts as causing costs--the same cost of software to launch queries, the same cost of signaling links to transport queries, and the same cost of a database to process queries, are incurred in processing queries that originate in wireless networks and terminate to number-portability-ready NXXs in the wireline network. Wireless N-1 carriers should pay query charges because their traffic, too, drives query costs. As to the benefit side of the equation, there are that two groups of customers that benefit from LNP: those that port their numbers and those that can reach customers with ported numbers. At least until the implementation of wireless number portability, wireless customers fall in the second category.

²⁰ Id. at ¶ 78 (footnotes omitted).

III. COMMENTER'S ATTACKS ON THE INCLUSION OF CERTAIN COSTS, SUCH AS SOME SS7 AND OPERATING SUPPORT SYSTEMS COSTS AND THE INCLUSION OF A LOADING FACTOR, ARE WRONG.

**A. SS7 AND OSS COSTS SHOULD BE INCLUDED WHERE THEY ARE
A COST OF THE SERVICE**

The Designation Order asks whether "costs such as those carriers incurred to modify SS7, OSS, and billing systems are costs not directly related to providing number portability, and therefore are not properly included in query charges."²¹ Provision of number portability and the associated query services require the use of the Common Channel Signaling ("CCS") signaling network. The CCS network is impacted several ways: (1) new links are required to accommodate increased signaling traffic from LNP queries or to connect new network nodes (e.g., LSMS), (2) STPs must be modified to

²¹ Designation Order at ¶ 9. Although there is some question as to whether the tariffs in issue are "cost recovery" tariffs in the sense of the recovery mandated under section 251(e)(2), the cost categories in issue are unquestionably "directly related" to providing number portability and are, therefore, properly classified as Type II costs. The Commission has not yet defined exactly what it will define as Type II costs. Although the Commission is expected to do so in the near term, some insight is provided by the Commission's tentative conclusion in the Further Notice of Proposed Rulemaking (the "FNPRM") issued with the First Report and Order. In the FNPRM, the Commission categorizes Type II costs as "carrier-specific costs directly relating to providing number portability (e.g., the costs to purchase the switch software implementing number portability) . . . FNPRM at ¶ 208. As set forth in § 251(e)(2) of the 1996 Act, carriers are entitled to recover the costs of establishing number portability. It is prudent to apply a cost causation analysis to determination whether costs are Type II number portability costs. The Commission should, therefore, examine recoverable costs using a "but for" causation analysis. Essentially, the Commission should review costs through the lens of whether the costs would have been incurred but for the implementation of number portability. If the answer is "no, the costs would not have been incurred but for the implementation of number portability," the Commission should permit recovery of the costs through a competitively neutral mechanism.

accommodate 10-digit Global Title Translations ("GTT"), and (3) the switching capacity of the STP itself must be increased specifically to accommodate LNP queries.

To the extent relevant to the query service charge question, as SWBT, Pacific Bell, and others have urged, costs incurred to create or modify the SS7 network or OSSs solely in support of LNP requirements in a carrier's network meet the Commission's Type II costs definition. "Operations Support Systems" ("OSSs") provide a means within the network for efficient, accurate, rapid, dependable, and cost-effective provisioning, billing, activation, trouble handling, and modification of subscribers' telecommunications needs. Modifications in many OSSs are required for incumbent LECs to meet the Commission's, number-portability requirements. Some OSSs are created specifically in support of LNP; others are existing OSSs that require modification to support LNP. In each of these cases, costs were incurred that meet the Commission's definition of Type II costs. Without these modifications, incumbent LECs could not provision service for ported customers (either into or out of their networks) in compliance with the Commission's directives.²² Where the network modifications are required, they are an appropriate cost element for query services.

²² No CCS/SS7 costs should be allocated to LNP except those specifically required for the implementation of LNP. Even where existing CCS link and network growth capacity might be exhausted by LNP implementation, the cost of network additions should be allocated so that only the capacity directly attributable to LNP is in the cost of providing LNP while the remainder is treated as a general network upgrade.

B. THE USE OF AN APPROPRIATE LOADING FACTOR SHOULD BE PERMITTED

Sprint mischaracterizes the application of the "overhead loading factor" in the development of interstate rates based on incremental costs.²³ It is, instead, appropriate to include an overhead loading factor in developing rates for elements which incur recurring costs. As SWBT stated in its Direct Case in CC Docket No. 92-91.

Incremental costs reflect the costs caused by business decisions related to individual services. Each company, however, incurs other costs which are not directly related to individual services. These shared or common costs are necessary in order for the firm to operate efficiently and survive. These costs are, however, unaffected by decisions regarding the provisioning of individual services and would therefore be inappropriate to include in the price floor of the individual service. Nevertheless, the existence of these shared costs means that all service prices should exceed their relevant incremental costs.

This reasoning is as true today as it was in 1993. A LEC incurs a great many costs that it would not be reasonable to direct to a particular service because to do so would require an expensive, detailed record system that would increase its costs as a company and for individual services. For example, to recover the cost of developing a tariff filing, a LEC would have to track exactly how many hours each individual worked to develop cost data, demand data, tariff page revisions, and the number of pieces of paper underlying the entire process. It is far more efficient to recover these types of costs via an overhead loading factor.²⁴

²³ Sprint at 3-4.

²⁴ Overhead loading factors should be based on ARMIS data. As the Commission stated in footnote 93 of its Order in In the Matter of Open Network Architecture Tariffs of Bell Operating Companies, CC Docket No. 92-91 (released December 15, 1993), "ARMIS data is a reasonable basis for alternative overhead calculations, and is the only verifiable alternative method available." *Id.* Although the Commission went on to say the use of ARMIS data appeared reasonable in that instance and should not be construed as